

## AMENDMENTS

Please amend the above-identified application as follows:

### *In the Specification*

In accordance with 37 C.F.R. § 1.125 and MPEP § 608.01(q), Applicants submit a substitute specification. In particular accordance with 37 C.F.R. § 1.125 (b)(2), Applicants also submit a marked-up copy of the substitute specification showing the matter being added to and the matter being deleted from the specification of record. The substitute specification includes the same changes as are indicated in the marked-up copy. Applicants respectfully submit that no new matter has been entered by the amendments to the specification.

### *In the Claims*

Please add the following new claims 23-107:

23. (Newly Added) A signal detector, comprising:
- a receiver configured to detect at least one signal of interest perturbed by noise and configured to detect at least one reference signal;
  - a multiplier configured to derive data from a segment of the at least one signal of interest, the multiplier configured to multiply the data with data representative of at least one hypothesis, and the multiplier configured to provide product data representative of the segment and the at least one hypothesis; and
  - a coherent integrator configured to integrate the product data over a duration of time, and configured to derive correlation data useful for detecting the signal of interest.
24. (Newly Added) The signal detector of claim 23, wherein the signal of interest is a plurality of successive frames separated by a frame boundary, and wherein each the segment having an ending portion of a first frame of the plurality of frames, a beginning portion of a second frame successive to the first frame, and the frame boundary between the first frame and the second frame.